Indiana Crop & Weather Report

United States Dept of Agriculture

Indiana Agricultural Statistics Service
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West Lafayette, IN 47906-4145
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CROP REPORT FOR WEEK ENDING JULY 14

AGRICULTURAL SUMMARY

Farmers welcomed the much needed precipitation last week. The rain helped relieve the stress on major crops from the recent hot temperatures according to the Indiana Agricultural Statistics Service. However, portions of the state received very little or no rain during the week. Major crops and pastures remain under stress in some areas, especially in the eastern and southwestern regions of the state. Strong winds hit a few isolated areas, causing some damage. Winter wheat harvest was in full swing in the northern regions of the state. Cutting and baling hay along with spraying soybean fields for weed control continued during the week.

FIELD CROPS REPORT

There were 6.1 **days suitable for fieldwork**. Corn **condition** is rated 48 percent good to excellent compared with 48 percent last week and 78 percent last year at this time. Nine percent of the corn acreage has **silked** compared with 48 percent last year and 36 percent for the 5-year average. Planting of double crop soybeans is virtually complete. Soybean **condition** is rated 51 percent good to excellent compared with 51 percent last week and 70 percent a year earlier. Twenty-two percent of the soybean acreage is **blooming** compared with 52 percent last year and 45 percent for the 5-year average. Three percent of the soybean acreage is **setting pods** compared with 15 percent last year and 9 percent for the average.

Winter wheat **harvest** is 91 percent complete compared with 92 percent last year and 85 percent for the 5-year average. By area, 78 percent of the wheat acreage is harvested in the north, 94 percent in the central regions and 99 percent in the south.

Other activities during the week included baling hay and straw, mowing roads and pastures, cleaning up and repairing equipment, scouting fields, moving grain to market, attending county fairs, cleaning grain bins and taking care of livestock.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated 3 percent excellent, 34 percent good, 44 percent fair, 15 percent poor and 4 percent very poor. Pastures are deteriorating rapidly in some areas of the state. Second cutting of **alfalfa** hay is 52 percent complete compared with 70 percent last year and 61 percent for the average. Feeding of hay has begun on some farms. Livestock are in mostly good condition, but remain under some stress.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
		Percent		
Corn Silked	9	2	48	36
Soybeans Blooming	22	6	52	45
Soybeans Podding	3	NA	15	9
Winter Wheat Harvested	91	65	92	85
Alfalfa Second Cutting	52	25	70	61

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excel-lent
			Percent		
Corn	4	11	37	42	6
Soybean	3	11	35	47	4
Pasture	4	15	44	34	3

SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
		Percent	
Topsoil			
Very Short	18	20	4
Short	41	42	17
Adequate	40	36	71
Surplus	1	2	8
Subsoil			
Very Short	11	7	6
Short	36	34	18
Adequate	51	55	70
Surplus	2	4	6
Days Suitable	6.1	6.9	5.2

CONTACT INFORMATION

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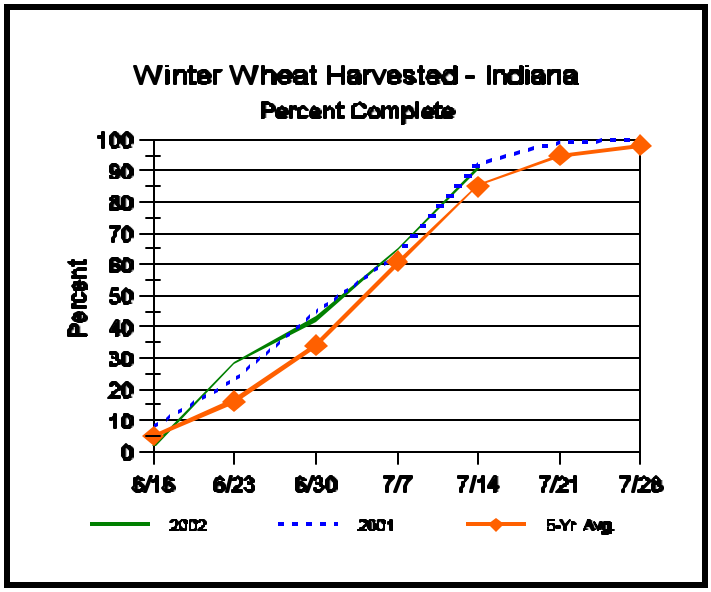
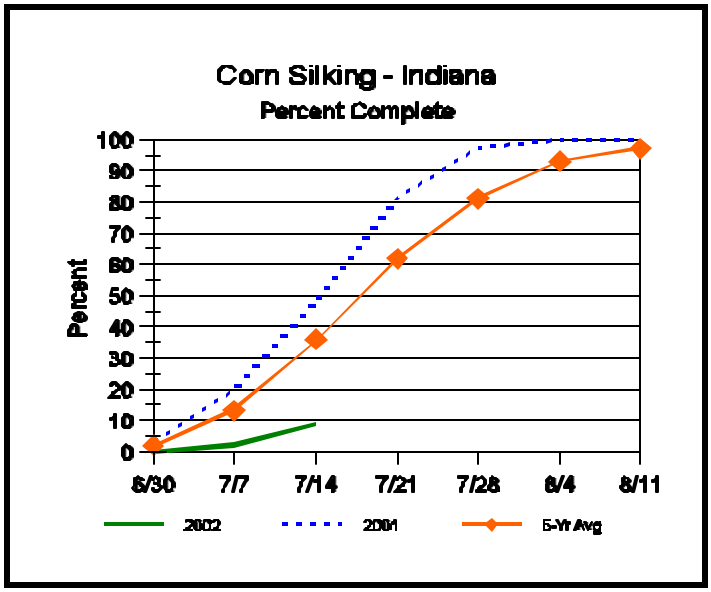
http://www.nass.usda.gov/in/index.htm





Other Agricultural Comments And News

Timing of Crop Stress is Critical !

Last month, I wrote an article about the importance of the timing of stress and the existence of other stress factors in determining whether or not stand establishment problems developed on some of the few acres of early-planted corn (**Some Corn Afflicted With TMDS Syndrome**, *P&C Newsletter*, 6/14/02). Recently, colleagues in Entomology here at Purdue reported that corn rootworm (CRW) larvae were feeding on the roots of late-planted corn in some first year corn after soybean fields and that dramatic stunting subsequently developed (**Rootworm Damage Being Reported on Late-Planted Corn**, *P&C Newsletter*, 6/28/02 and **Stunting and Lodging of Late-Planted Corn**, *P&C Newsletter*, 7/5/02).

The incidence of CRW larval injury to late-planted corn seedlings serves as another morbid example of the importance of the timing of stress relative to crop growth stage plus the existence of other complicating stresses in determining whether or not subsequent crop stunting occurs. I've walked some of these fields and want to share my thoughts with you on these teachable examples.

Root injury to first-year corn by CRW larvae is not unusual in many parts of Indiana and Illinois due to the development of the variant of CRW that no longer preferentially lays eggs in corn fields. What was unusual this year was the preponderance of corn acres planted in late May throughout Indiana due to excessive and frequent rains earlier in the season. The late corn planting also coincided with CRW egg hatch and larval feeding activity.

Consequently, CRW larvae were "waiting at the table" in some fields at the time of corn emergence and initial seedling development whereas normally, with earlier corn planting, corn is much further developed (close to V6 leaf stage) before CRW egg hatch occurs and CRW larvae begin their feeding activities. In fields that I walked in late June, there was evidence of CRW larval feeding on the seminal (seed) roots and often the first set of nodal roots originating from the crown of the plants. In some cases, the mesocotyl of the young seedlings also showed evidence of CRW larval feeding injury.

In and of itself, the CRW injury to seminal and nodal roots is not unusual. What is important to understand, though, is the timing of this injury relative to crop growth stage. This injury occurred to very young corn seedlings that were just beginning to form permanent (nodal) root systems rather than injury to well-established corn plants closer to V6 in growth stage.

Such stress to the initial nodal root system of corn plants will stunt further crop development by itself, but the proverbial "straw that broke the camel's back" was the concurrent hot and dry weather conditions that were rapidly drying the upper two or more inches of surface soil in some of these fields. Remember that the crown of a corn plant is positioned at about three- fourths inch (2 cm) below the soil surface. The excessively dry and hot soil imposed further stress on the nodal root development, leading to wilting of seedlings and eventual death for some.

(Continued on Page 4)

Weather Information Table

Week ending Sunday July 14, 2002

Station	Past Week Weather Summary Data							Accumulation				
	Air Temperature				Precip.		Avg 4 in Soil	April 1, 2002 thru July 14, 2002				
								Precipitation			GDD Base 50°F	
	Hi	Lo	Avg	DFN	Total	Days	Temp	Total	DFN	Days	Total	DFN
Northwest (1)												
Chalmers_5W	95	53	73	-2	0.98	1		11.75	-1.24	43	1480	+12
Valparaiso_AP_I	93	53	73	+0	0.78	2		13.07	-0.85	39	1456	+154
Wanatah	94	48	72	-1	0.84	2	82	12.79	-0.57	42	1382	+144
Wheatfield	94	52	73	+0	1.06	1		12.12	-1.04	34	1419	+142
Winamac	93	56	73	+0	0.59	2	82	11.86	-1.35	42	1407	+69
North Central(2)												
Plymouth	93	53	72	-3	0.70	2		13.51	-0.31	43	1334	-61
South_Bend	94	52	73	-1	1.41	2		11.62	-1.31	41	1398	+113
Young_America	91	55	73	-2	0.80	2		13.32	+0.66	39	1497	+136
Northeast (3)												
Columbia_City	90	51	71	-2	0.46	2	78	11.55	-1.47	41	1303	+83
Fort_Wayne	92	54	73	-1	0.18	2		13.35	+1.36	38	1463	+112
West Central (4)												
Greencastle	91	54	73	-4	2.18	1		20.89	+6.38	40	1444	-114
Perrysville	92	55	74	-1	0.24	1	79	17.49	+3.30	41	1552	+97
Spencer_Ag	89	57	73	-2	1.83	1		21.50	+6.49	44	1529	+77
Terre_Haute_AFB	96	58	76	+0	0.00	0		25.23	+11.10	42	1708	+152
W_Lafayette_6NW	93	54	73	+0	1.11	2	81	17.98	+4.93	48	1532	+167
Central (5)												
Eagle_Creek_AP	90	58	75	+0	1.41	2		17.99	+4.82	44	1650	+111
Greenfield	89	57	74	-2	0.81	1		21.33	+7.14	46	1556	+94
Indianapolis_AP	91	59	75	+0	0.66	1		16.88	+3.71	39	1711	+172
Indianapolis_SE	89	57	74	-3	0.12	1		19.64	+6.12	39	1548	+32
Tipton_Ag	90	53	72	-3	0.49	1	80	14.37	+1.31	39	1420	+103
East Central (6)												
Farmland	92	52	72	-1	0.61	1	78	13.70	+0.48	44	1475	+199
New_Castle	86	53	70	-4	0.83	1		17.26	+2.87	35	1282	-24
Southwest (7)												
Evansville	95	65	79	+1	0.38	2		17.53	+3.45	35	2011	+179
Freelandville	94	61	76	+0	1.68	1		19.49	+4.96	34	1789	+173
Shoals	94	61	75	+1	0.23	1		19.57	+3.97	35	1685	+138
Stendal	94	64	77	+1	0.57	2		20.26	+4.55	35	1858	+150
Vincennes_5NE	97	62	77	+1	0.04	1	83	19.51	+4.98	36	1835	+219
South Central(8)												
Leavenworth	92	60	75	-1	1.51	3		18.19	+2.42	33	1783	+235
Oolitic	90	60	75	+0	0.36	1	78	22.70	+7.91	43	1629	+161
Tell_City	95	65	79	+2	0.00	0		17.82	+2.02	26	2096	+372
Southeast (9)												
Brookville	94	54	75	+2	0.10	1		18.09	+4.00	36	1644	+271
Milan_5NE	87	56	71	-3	0.15	2		23.56	+9.47	44	1406	+33
Scottsburg	91	56	74	-3	0.59	1		20.08	+5.56	39	1664	+60

DFN = Departure From Normal (Using 1961-90 Normals Period).
GDD = Growing Degree Days.
Precipitation (Rainfall or melted snow/ice) in inches.
Precipitation Days = Days with precip of .01 inch or more.
Air Temperatures in Degrees Fahrenheit.

The above weather information is provided by AWIS, Inc.
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www.awis.com or call toll free at 1-888-798-9955.

Timing of Crop Stress is Critical ! (Continued)

In the fields I walked, there were also interesting patterns of stunted and nearly normal plants within the field. What was unusual was that the nearly normal plants seemed to coincide with the trafficked areas of the field (tractor and planter tires) where soil compaction was the greatest.

These nearly normal plants often exhibited similar levels of root injury due to CRW feeding, but several nodal roots of each plant had successfully elongated into the moist soil profile below the upper dry two inches. Plants that were stunted but not wilted usually had at least one nodal root that had managed to elongate down to moist soil. In contrast, almost every severely wilted plant could be characterized by not having any nodal roots below the excessively dry upper two inches of soil.

I could only surmise that the trafficked areas of the field had not dried out as rapidly as the non-trafficked areas after earlier rains and that the young corn plants had a bit longer opportunity to successfully establish one or more nodal roots before the excessive heat settled in by mid-June.

Injured corn plants in those fields that received rainfall from the spotty thunderstorms the last week of June survived the CRW damage, but now comprise the less favorable component of the tall corn/short corn phenomenon that characterizes those fields today. Injured and severely wilted corn plants in those fields that did not receive rainfall from the spotty thunderstorms have likely moved on to that "Great Corn Field in the Sky."

Bottom Line: As with good comedy, timing is everything, especially when it comes to the effects of severe early season stress on corn. Do not discount the potential effects of a seemingly minor stress when the timing of its occurrence relative to crop growth stage or other complicating stress factors is "perfect" for crop injury.

Related References:

Nielsen, Bob. 2001. Corn Root Development [Online]. Purdue University Cooperative Extension Service. <http://www.kingcorn.org/news/articles.01/Corn_Root_Dev-0509.html> (Verified 7/5/02).

Nielsen, Bob. 2002. Some Corn Afflicted With TMDS Syndrome [Online]. Purdue University Cooperative Extension Service. <http://www.kingcorn.org/news/articles.02/TMDS-0609.html> (Verified 7/5/02).

Nielsen, Bob. 2002. Too Much Dang Stress – Recap [Online]. Purdue University Cooperative Extension Service. <http://www.kingcorn.org/news/articles.02/TMDS2-0625.html> (Verified 7/5/02).

Obermeyer, John, Rich Edwards, and Larry Bledsoe. 2002.Rootworm Damage Being Reported on Late-Planted Corn [Online]. Pest & Crop Newsletter, No. 15, June 28. Purdue University Cooperative Extension Service. <http://www.entm.purdue.edu/entomology/ext/targets/p&c/P&C2002/P&C15_2002.pdf>(Verified 7/5/02).

Obermeyer, John, Rich Edwards, and Larry Bledsoe. 2002. Stunting and Lodging of Late-Planted Corn [Online]. Pest & Crop Newsletter, No.16, July 5. Purdue University Cooperative Extension Service. <http://www.entm.purdue.edu/entomology/ext/targets/p&c/P&C2002/P&C16_2002.pdf> (Verified 7/5/02).

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